REMARKS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

Status of Claims

Claims 1-13 are currently pending, of which claims 1 and 8 are independent.

In the Examiner's Answer dated June 28, 2008, claims 1, 3-5, 8-11, and 13 were rejected and claims 2, 6, 7, and 12 were objected to.

By virtue of the amendments above, claims 1-3, 6-10, 12, and 13 have been amended. Support for definition of the "recovery time" recited in independent claims 1 and 8 may be found in the specification, at least on page 6, lines 28-31. Support for the constant value of the recovery time for at least two flow rates recited at the end of independent claims 1 and 8 may be found in the specification, at least on page 7, line 1 to page 9, line 14, which describes that for any arbitrary decrease function of different flow rates, the increase function is such that the recovery time for the different flow rates is a constant value. The amendments in the dependent claims were made to provide proper antecedent basis for the elements recited therein.

Thus, no new matter has been introduced by way of the claim amendments. Entry thereof is therefore respectfully requested.

Summary of Office Action

Claims 1-7 were rejected under 35 U.S.C. 112, second paragraph as allegedly being indefinite.

Claims 1, 3-5, 8-11, and 13 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,842,424 to Key et al. (hereinafter "Key").

Claims 2, 6, 7, and 12 were indicated that they would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph and include all of the limitations of the base claim and any intervening claims.

The rejection above is respectfully traversed for at least the following reasons.

Allowable Subject Matter

The indication that claims 2, 6, 7, and 12 contain allowable subject matter is noted with appreciation. However, in this Response, claims 2, 6, 7, and 12 are not rewritten to include all the limitations of the base claims (independent claims 1 and 8) because independent claims 1 and 8, as amended above, are believed to be allowable over the cited documents of record.

Claim Rejection Under 35 U.S.C. 112, Second Paragraph

Claims 1-7 were rejected under 35 U.S.C. 112, second paragraph as allegedly being indefinite. Specifically, the Examiner asserted that, in independent claim 1, the phrase "recover the particular dataflow" should be changed to "recover the particular dataflow rate." In response, claim 1 has been amended to recite "recover the flow rate of the particular dataflow" as recommended by the Examiner. It is believed that the rejection of claims 1-7 under 35 U.S.C. 112, second paragraph has been overcome. Therefore, it is respectfully requested that the rejection of claims 1-7 under 35 U.S.C. 112, second paragraph be withdrawn.

Claim Rejection Under 35 U.S.C. §102

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

> Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

- **Claims 1, 3-5, 8-11, and 13:**

Claims 1, 3-5, 8-11, and 13 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Key. This rejection is respectfully traversed for at least the following reasons.

  - Independent Claim 1:

As amended, independent claim 1 recites, *inter alia*,

> wherein the increase function is based at least on the particular rate r and is adapted to recover the flow rate of the particular dataflow to the particular rate r over a period of time after a decrease in the flow rate, such that the recovery time is a constant value for at least two different flow rates, regardless of differing amounts by which the at least two different flow rates are decreased due to network congestion.

Key fails to teach or suggest the claimed features recited above for at least the following reasons. In the rejection of claim 1, the Examiner asserts that Key discloses in col. 2, lines 58-65 the "increase function" recited in claim 1. Specifically, the Examiner asserts that col. 2, lines 58-65 of Key discloses a linear increase function which is used to increase a congestion window size by 1 after a decrease, and which means the increase to a particular dataflow rate will take a constant time regardless of the current dataflow rate (See *Examiner's Answer*, page 5). Moreover, in the "Response to Argument" section of the Examiner's Answer, the Examiner provides an example, wherein assuming that a first dataflow rate has been cut from 100 to 50, and a second dataflow rate has been cut from 90 to 40, both of these dataflows would recover their dataflow rate in the same amount of time using the linear increase phase disclosed in col. 2, lines 58-65 of Key, 100–50=50, 90–40=50 (See *Examiner's Answer*, page 9).

As such, under the linear increase phase disclosed in Key wherein the window size is increased by 1, the rate of increase is constant regardless of what the original flow rate is. For example, if a first flow rate has decreased from 100 to 50 (decreased by one half), the first flow rate would increase back to its original rate of 100 at a constant increment of 1. Similarly, if a second flow rate has decreased from 40 to 20 (decreased by one half), the second flow rate would still increase back to its original rate of 40 at a constant increment of 1. Therefore, the linear increase phase in Key is constant regardless of whether the original flow rate is 100 or 40. Thus, the linear increase phase in Key is not based on the original flow rate. As a result, Key fails to teach or suggest "wherein the increase function is based at least on the particular rate r," as recited in claim 1, wherein the particular rate r is the original flow rate.

Furthermore, functionally, the linear increase phase disclosed in Key would not inherently provide a constant value for the "recovery time" for two different flow rates as recited in claim 1. In other words, in Key, if two flow rates decrease by a different amount, the recovery times for those two flow rates to get back to their original rates are not the same under the linear increase function disclosed in col. 2, lines 58-65 of Key. For instance, if a first flow rate of 100 decreases to 50 (a decrease of 50), and a second flow rate of 40 decreases to 20 (a decrease of 20, and thus, the first and second flow rates have a differing amount of decrease), the time duration for the first flow rate to go from 50 back to 100 is longer than the time duration for the second flow rate to go from 20 to 40, under the linear increase function disclosed in Key. Therefore, Key fails to teach or suggest, "wherein the increase function … is adapted to recover the flow rate of the particular dataflow to the particular rate r over a period of time after a decrease in the flow rate, such that the recovery time is a constant value for at least two different flow rates, regardless of differing amounts by which the at least two different flow rates are decreased due to network congestion," as recited in claim 1.

In addition, claim 1 recites, "wherein a recovery time is a duration of time elapsed from the time the flow rate is decreased from the particular rate r due to network congestion, until the time the flow rate recovers to the particular rate r." Key fails to teach or suggest the "recovery time" which is from the time a flow rate decreases from its original flow rate until the time it gets back to its original flow rate, as recited in claim 1. In Key, the linear increase phase disclosed in col. 2, lines 58-65 includes only the time that the flow rate increases towards its original flow rate, and does not include the time duration that the flow rate decreases from the original flow rate. In fact, Key is not concerned about the decrease of the flow rate or the time duration for the flow rate to recover to its original rate, because there is no mention of those features in Key. Rather, Key is only concerned about is how to increase the flow rate in such a way that the system can avoid getting to the congestion level too quickly (See col. 2, lines 58-59). More specifically, Key discloses that, in order to avoid getting the flow rate to the congestion level too quickly, the system reduces the rate of increment from increasing the window size by 2 to increasing the window size by 1, once the congestion window reaches one half of its original size before congestion (See col. 2, lines 46-65). As such, the linear increase phase (increasing the window size by 1) disclosed in Key is not the same as or equivalent to the "recovery time" as recited in claim 1.

For at least the foregoing reasons, Key fails to teach each and every feature of independent claim 1 and thus cannot anticipate independent claim 1. It is therefore respectfully requested that the rejection of independent claim 1 be withdrawn, and this claim be allowed.

- Independent Claim 8:

Amended independent claim 8 recites features similar to those of amended independent claim 1 as discussed above. Thus, independent claim 8 is also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 1 above. It is therefore respectfully requested that the rejection of independent claim 8 be withdrawn, and this claim be allowed.

- Dependent Claims 3-5, 9-11, and 13:

Claims 3-5, 9-11, and 13 are dependent from one of independent claims 1 and 8. Thus, they are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claims 1 and 8 above.

Furthermore, these dependent claims recite additional features not found in the cited documents of record. For instance, claims 3 and 13 recite, "decreasing function is mathematically represented as, $f_{dec}(r) = Max(r/m, R_{min})$" wherein Max() is a floor function. That mathematical representation means the decreasing function is the higher of r/m and R_{min}. Or more specifically, if r/m is higher than R_{min}, then $f_{dec} = r/m$, but if r/m is smaller than R_{min}, then $f_{dec} = R_{min}$. In the rejection of claims 3 and 13, the Examiner asserts that col. 9, lines 24-43 of Key discloses the decreasing function recited above (See *Examiner's Answer*, pages 5 and 7). However, that assertion is respectfully traversed. The passage in col. 9, lines 24-43 discloses that the TCP decreases its congestion window by one half in order to avoid congestion. As such, the decreasing function in col. 9, lines 24-43 of Key is one half. There is no teaching or suggestion in col. 9, lines 24-43 for choosing between a calculated decreasing function of "r/m" (where r is the original flow rate and m is a constant greater than one) and a predetermined minimum window size, for the decreasing function, because the decreasing function is simply decreasing the congestion window size in half. Also, the Examiner's Answer asserts that the decreasing of the window by one half is "bounded by a minimum rate of 0" (*Examiner's Answer*, pages 5 and 7). However, that assertion is unreasonable and baseless because there is nothing in col. 9, lines 23-43 that supports that the decreasing of the window size by one half is bounded by a minimum rate of 0, or that the decreasing of the window size is the higher of the minimum rate 0 and the halved window size. Therefore, it is respectfully submitted that Key fails to teach or suggest the feature $f_{dec}(r) = Max(r/m, R_{min})$ recited in claims 3 and 13.

It is therefore respectfully requested that the rejection of claims 3-5, 9-11 and 13 be withdrawn, and these dependent claims be allowed.

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited. Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: June 1, 2010

By /Ashok K. Mannava/
Ashok K. Mannava
Registration No. 45,301

MANNAVA & KANG, P.C.
11240 Waples Mill Road
Suite 300
Fairfax, VA 22030
(703) 652-3822
(703) 865-5150 (facsimile)